Amendment to the Claims:

This listing of the claims will replace all prior versions, and listings, of claims in the application.

Listing of Claims:

Claim 1 (Currently Amended). A method ~~of converting moderate amounts of heat into~~ for generating mechanical energy at high efficiencies, comprising the steps of:

~~supertropically expanding a gas~~ using a thermal generator for heating an ammonia-refrigerant to produce a heated and pressurized vapor having a temperature within a range of approximately 575°F to approximately 700°F, at a pressure of approximately 72 psi to approximately 120 psi;

using a positive displacement expander, having a fixed expansion ratio, for receiving and expanding the heated and pressurized vapor, as received from the thermal generator, against a low pressure subatmospheric sink in order to produce a mechanical work energy;

using said mechanical work energy to rotate a shaft coupled with an electrical generator to produce electrical power;

using a receiver for receiving and separating a liquid part and a vapor part of a saturated vapor discharge which exits from the positive displacement expander;

using an absorber to generate a low pressure sub-atmospheric sink, at approximately 0.2 bar as used by the positive displacement expander for expansion of the heated and pressurized gas at an inlet to the expander, to the saturated vapor discharge at an exit from the expander having a temperature between approximately -90 F and approximately -70°F, a liquid part of the saturated vapor discharge is approximately 60% and a vapor part of the saturated vapor discharge is approximately 40%;

using a desorber for heating and separating the vapor part from liquid produced from the absorber, and providing a resultant vapor to the thermal generator for reuse;

using a pump for moving absorbent liquid produced from the absorber to the desorber;

using a regenerator consisting of a heat exchanger with cooling and vaporization components, which recovers heat energy contained in a liquid stream received from the desorber, to heat and vaporize the liquid part of the ammonia-refrigerant received from the receiver in order to provide a resultant vapor to the heat generator for reuse; and

using a second pump to transfer the ammonia-refrigerant from the receiver to the regenerator ~~against a vacuum, as generated by chemosorption, in order to convert moderate amounts of heat into~~ , wherein the method generates mechanical energy at high efficiencies.

Claim 2 (Canceled).

Claim 3 (Currently Amended). A closed loop ~~supertropic energy generating package~~ system for generating mechanical energy at high efficiencies using an ammonia-refrigerant as the working fluid, comprising:

~~a gaseous source;~~

a thermal generator for heating ~~the source of~~ an ammonia-refrigerant~~/water~~ ~~and generating a gas~~ to produce a heated and pressurized vapor having a temperature within a range of approximately 575°F to approximately 700°F, at a pressure of approximately 72 psi to approximately 120 psi ;

a positive displacement ~~scroll~~ expander having a fixed expansion ratio, for receiving and expanding the heated and pressurized vapor against a low pressure sub-atmospheric sink in order to produce mechanical work energy ~~gas; and~~

~~a power source being driven by the expanding gas, the power source generating electricity therefrom~~;

a shaft coupled with an electrical generator, wherein rotating the shaft by the mechanical work energy causes the electrical generator produce electrical power;

a receiver for receiving and separating a liquid part and a vapor part of a saturated vapor discharge which exits from the positive displacement expander;

an absorber to generate a low pressure sub-atmospheric sink, at approximately 0.2 bar as used by the positive displacement expander for expansion of the heated and pressurized gas at an inlet to the expander, to the saturated vapor discharge at an exit from the expander having a temperature between approximately -90 F and approximately -70°F, a liquid part of the saturated vapor discharge is approximately 60% and a vapor part of the saturated vapor discharge is approximately 40%;

a desorber for heating and separating the vapor part from liquid produced from the absorber, and providing a resultant vapor to the thermal generator for reuse;

a pump for moving absorbent liquid produced from the absorber to the desorber;

a regenerator consisting of a heat exchanger with cooling and vaporization components, which recovers heat energy contained in a liquid stream received from the desorber, to heat and vaporize the liquid part of the ammonia-refrigerant received from the receiver in order to provide a resultant vapor to the heat generator for reuse; and

a second pump to transfer the ammonia-refrigerant from the receiver to the regenerator.

Claims 4-19 (Canceled).

Claim 20 (New). A method for generating mechanical energy at high efficiencies, comprising the steps of:

using a thermal generator for heating an ammonia-refrigerant to produce a heated and pressurized vapor having a temperature within a range of approximately 575°F to approximately 700°F, at a pressure of approximately 72 psi to approximately 120 psi;

using a positive displacement expander, having a fixed expansion ratio, for receiving and expanding the heated and pressurized vapor, as received from the thermal generator, against a low pressure subatmospheric sink in order to produce a mechanical work energy;

using said mechanical work energy to rotate a shaft coupled with an electrical generator to produce electrical power;

using a receiver for receiving and separating a liquid part and a vapor part of a saturated vapor discharge which exits from the positive displacement expander;

using an absorber to generate a low pressure sub-atmospheric sink, at approximately 0.2 bar as used by the positive displacement expander for expansion of the heated and pressurized gas at an inlet to the expander, to the saturated vapor discharge at an exit from the expander having a temperature between approximately -90 F and approximately -70°F, a liquid part of the saturated vapor discharge is approximately 60% and a vapor part of the saturated vapor discharge is approximately 40%;

using a heat exchanger, which is positioned within the absorber for cooling an absorption process in the absorber and recovering a heat produced as a result of the absorption process for heating the liquid part received from the receiver prior to delivery to a regenerator for reuse;

using a desorber for heating and separating the vapor part from liquid produced from the absorber, and providing a resultant vapor to the thermal generator for reuse;

using a pump for moving absorbent liquid produced from the absorber to the desorber;

using the regenerator consisting of another heat exchanger with cooling and vaporization components, which recovers heat energy contained in a liquid stream received from the desorber, to heat and vaporize the liquid part of the ammonia-refrigerant received from the receiver in order to provide a resultant vapor to the heat generator for reuse; and

using a second pump to transfer the ammonia-refrigerant from the receiver to the regenerator via the heat exchanger installed within the absorber, wherein the method generates mechanical energy at high efficiencies.

Claim 21 (New). A closed loop system for generating mechanical energy at high efficiencies using an ammonia-refrigerant as the working fluid, comprising:

a thermal generator for heating an ammonia-refrigerant to produce a heated and pressurized vapor having a temperature within a range of approximately 575°F to approximately 700°F, at a pressure of approximately 72 psi to approximately 120 psi ;

a positive displacement expander having a fixed expansion ratio, for receiving and expanding the heated and pressurized vapor against a low pressure sub-atmospheric sink in order to produce mechanical work energy ;

a shaft coupled with an electrical generator, wherein rotating the shaft by the mechanical work energy causes the electrical generator produce electrical power;

a receiver for receiving and separating a liquid part and a vapor part of a saturated vapor discharge which exits from the positive displacement expander;

an absorber to generate a low pressure sub-atmospheric sink, at approximately 0.2 bar as used by the positive displacement expander for expansion of the heated and pressurized gas at an inlet to the expander, to the saturated vapor discharge at an exit from the expander having a temperature between approximately -90 F and approximately

-70°F, a liquid part of the saturated vapor discharge is approximately 60% and a vapor part of the saturated vapor discharge is approximately 40%;

a heat exchanger, which is positioned within the absorber for cooling an absorption process in the absorber and recovering a heat produced as a result of the absorption process for heating the liquid part received from the receiver prior to delivery to a regenerator for reuse;

a desorber for heating and separating the vapor part from liquid produced from the absorber, and providing a resultant vapor to the thermal generator for reuse;

a pump for moving absorbent liquid produced from the absorber to the desorber;

the regenerator consisting of another heat exchanger with cooling and vaporization components, which recovers heat energy contained in a liquid stream received from the desorber, to heat and vaporize the liquid part of the ammonia-refrigerant received from the receiver in order to provide a resultant vapor to the heat generator for reuse; and

a second pump to transfer the ammonia-refrigerant from the receiver to the regenerator via a heat exchanger installed within the absorber.

Claim 22 (New) The system of claim 3, wherein the positive displacement expander includes:

a scroll expander having a fixed expansion ratio.

Claim 23 (New) The system of claim 3, wherein the positive displacement expander includes:

a rotary vane expander having a fixed expansion ratio.

Claim 24 (New) The system of claim 3, wherein the positive displacement expander includes:

a Wankel-type engine having a fixed expansion ratio.

Claim 25 (New). The system of claim 21, wherein the positive displacement expander includes:

a scroll expander having a fixed expansion ratio.

Claim 26 (New). The system of claim 21, wherein the positive displacement expander includes:

a rotary vane expander having a fixed expansion ratio.

Claim 25 (New). The system of claim 21, wherein the positive displacement expander includes:

a Wankel-type engine having a fixed expansion ratio.

Claim 26 (New). The method of claim 1, further comprising the step of:

providing a scroll expander having a fixed expansion ratio as the positive displacement expander.

Claim 27 (New). The method of claim 1, further comprising the step of:

providing a rotary vane expander having a fixed expansion ratio as the positive displacement expander.

Claim 28 (New). The method of claim 1, further comprising the step of:

providing a Wankel-type engine having a fixed expansion ratio as the positive displacement expander.

Claim 29 (New). The method of claim 20, further comprising the step of:

providing a scroll expander having a fixed expansion ratio as the positive displacement expander.

Claim 30 (New). The method of claim 20, further comprising the step of:

providing a rotary vane expander having a fixed expansion ratio as the positive displacement expander.

Claim 31 (New). The method of claim 20, further comprising the step of:

providing a Wankel-type engine having a fixed expansion ratio as the positive displacement expander.